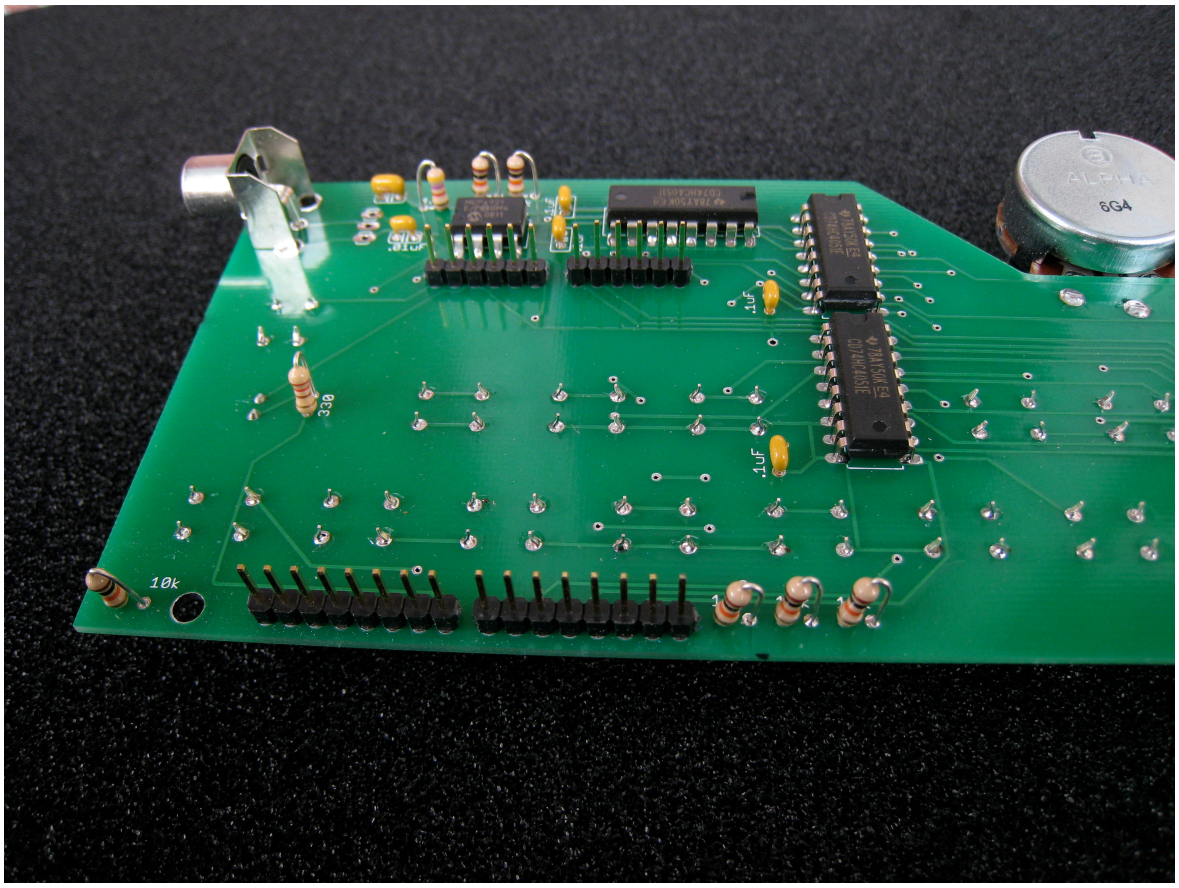
Pocket Piano Arduino Kit

Contents

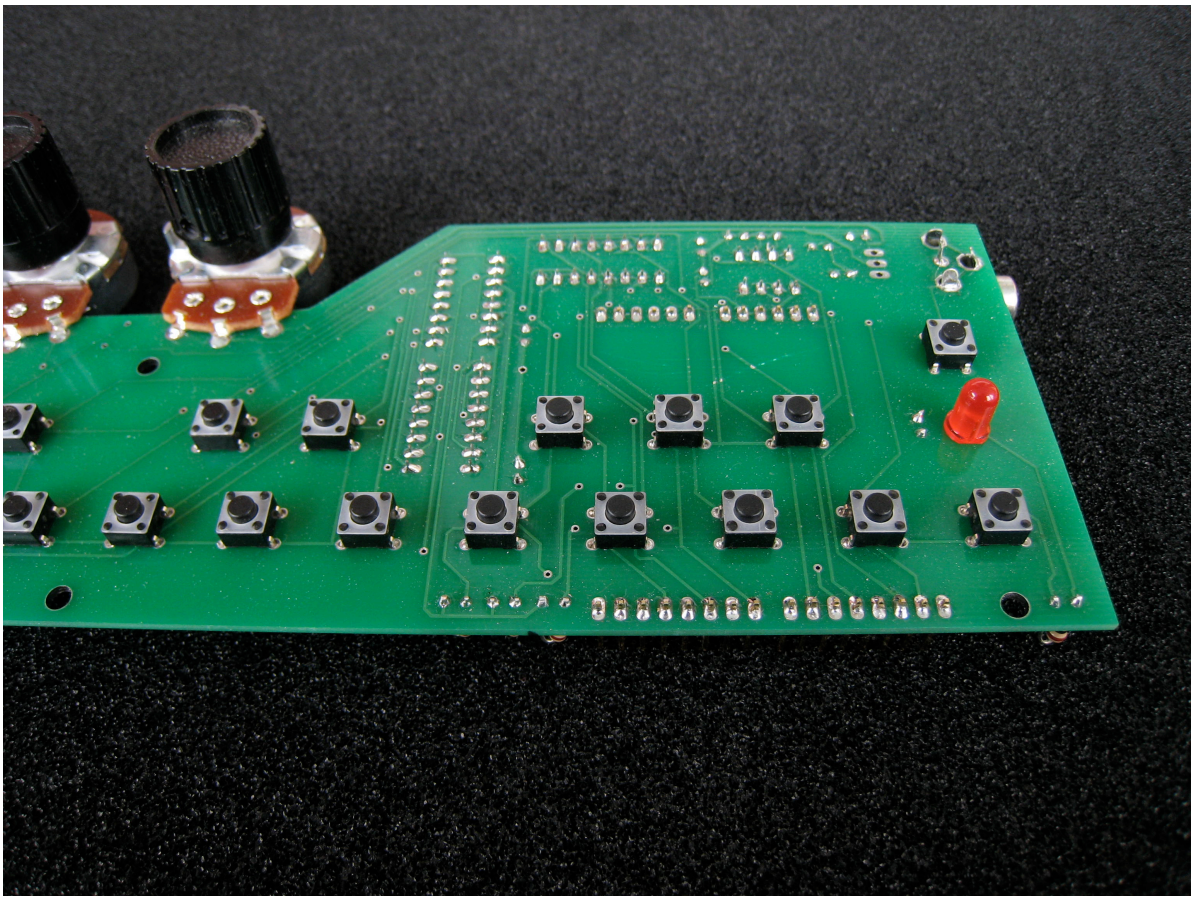
1x Printed Circuit Board
3x 74HC4051N multiplexor IC (16-pin DIP)
1x MCP4921 digital-to-analog converter
26x Tactile switches
4x 0.1μF mylar capacitors (labeled "104")
1x 0.01μF mylar capacitor (labeled "103")
1x 1μF mylar capacitor (labeled "105")
6x 10K Ω resistors (brown, black, orange)
1x 220 Ω resistor (red, red, brown)
1x 4.7K Ω resistor (yellow, violet, orange)
4x 10K Ω Potentiometers
1x Red LED
1x Female Phono Jack (white)

Assembly

Assembling the kit requires soldering the components to the printed circuit board (PCB). It is very important that the components are soldered on the correct side of the PCB. The ***bottom*** of the PCB has printed information in white ink and looks like this:



The ***top*** is the side without any printed information and looks like this:

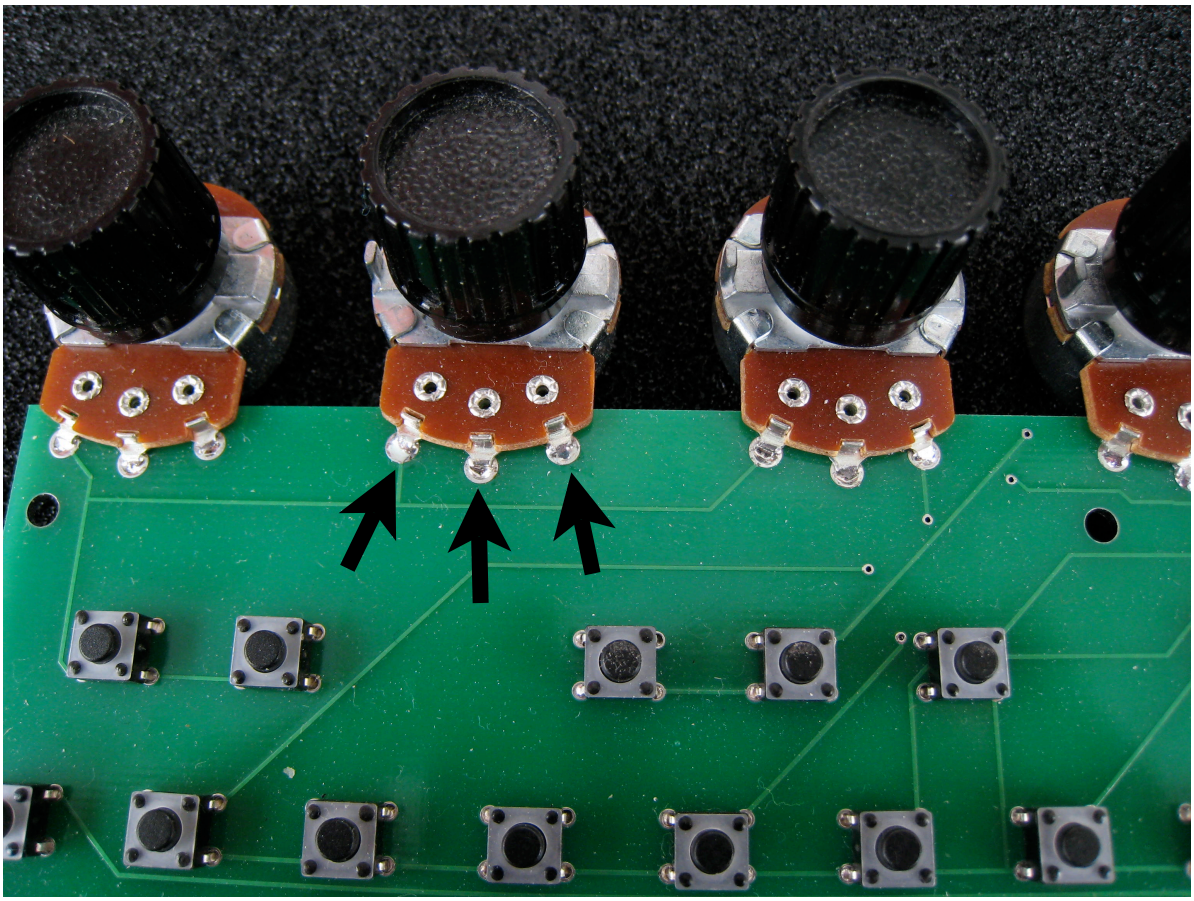


Components should be soldered in this order (the ***bottom*** should be soldered first.):

1. Integrated Circuits (ICs) - three multiplexors and one digital-to-analog converter. Make sure the orientation notches on the sockets line up with the notches on socket outline drawings on the circuit board. The legs of the ICs might be too wide for the sockets (as the case usually is) so gently bend them to a narrower angle.
2. Capacitors
3. Resistors The resistors are to be soldered in vertical orientation (See photo above)
4. Header Pins
5. RCA Jack

Top

1. Tactile Switches
2. LED - The cathode of the LED (the flat part of the red plastic) faces the opposite side of the PCB as the potentiometers.
3. Potentiometers. Be sure to solder both sides of the through holes for extra strength as shown below:



Power

The circuit requires a 9 VDC center positive power adapter if you want to use it away from your computer. Be sure to switch the power header on your Arduino to 'external.'